

1.0 INTRODUCTION

1.1 NATIONAL ENVIRONMENTAL POLICY ACT AND RELATED PROCEDURES

In accordance with the Department of Energy (DOE) National Environmental Policy Act (NEPA) implementing regulations, DOE is required to evaluate the potential environmental impacts of DOE facilities, operations, and related funding decisions. Based on action by the U.S. Congress, DOE has funding available to support the proposed project described in the following discussions and Chapter 2 of this Environmental Assessment (EA).

The Ohio State University (OSU) is a not-for-profit educational institution that would administer the federal funds for the proposed Ohio 4-H Center with Green Building Technologies (the Ohio 4-H Center project). The decision to use federal funds in support of OSU's proposed project requires DOE to address NEPA requirements and related environmental documentation and permitting requirements. In compliance with the NEPA (42 U.S.C. 4321) and DOE's NEPA implementing regulations (10 CFR section 1021.330) and procedures, this EA examines the potential environmental impacts of DOE's decision to support the project in Franklin County, Ohio, including construction of the Ohio 4-H Center, as well as a No Action Alternative as set forth in Chapter 2.

1.2 BACKGROUND

The Ohio State 4-H Green Building Project, as designed by the OSU project team, is planned as a multi-disciplinary learning center, with classrooms and learning labs as well as state and administrative offices for the 4-H program. As the home of Ohio 4-H—and the first facility of its kind on a land-grant university campus in the country—the Ohio 4-H Center is planned to feature:

- Flexible multi-purpose space for hands-on program opportunities for youth, volunteers, professional leaders and supporters.
- Educational conference and classroom facilities.
- State-of-the-art technology linking the Ohio 4-H Center to Ohio's 88 counties, the nation, and the world.
- "Green" features such as a hybrid geothermal/cooling tower HVAC system; structural steel containing at least 90% recycled content; and a "green housekeeping plan" to reduce water and energy consumption.

The Ohio 4-H Center is planned to provide a site for program activities designed to involve and engage increased numbers of Ohio youth and volunteer leaders, and for OSU faculty and staff to enhance the field of positive youth development through teaching and research. The Ohio 4-H Center is planned to provide access to OSU research and resources through distance learning opportunities, as well as through on-site conferences, workshops, and seminars for youth and adults—all of which will serve to strengthen local 4-H programs.

The proposed use of DOE funding for this project is to support the construction phase of two features within the Ohio 4-H Center designed for energy efficiency: 1) A hybrid geothermal/cooling tower HVAC system for heating and cooling and 2) the incorporation of recycled structural steel members.

Green buildings are designed to meet certain objectives such as protecting occupant health; using energy, water, and other resources more efficiently; and reducing overall impacts to the

environment. The proposed Ohio 4-H Center would incorporate several green building principles, including site selection, use of recycled building materials, and energy efficient heating and cooling systems. The Ohio 4-H Center is proposed at a site that takes advantage of an existing mass transit system and the site development plan strives to protect and retain existing landscaping and natural features. The proposed geothermal/cooling tower HVAC system would allow the Ohio 4-H Center to achieve improved energy efficiency levels beyond those found in typical buildings. The Ohio 4-H Center achieves materials efficiency through the selection of recycled structural steel members and low volatile organic compound (VOC) emission paints, coatings and adhesives. Such products promote resource conservation and efficiency and occupant health. The Ohio 4-H Center achieves water efficiency by using ultra low-flush toilets, low-flow shower heads, and other water conserving fixtures and promotes occupant health by providing adequate ventilation and a high-efficiency, in-duct filtration system. Heating and cooling systems that ensure adequate ventilation and proper filtration can have a considerable positive impact on indoor air quality.

The project site is located northwest of the intersection of Lane Avenue and Fred Taylor Drive in Franklin County, Ohio (see Figures 1-1 and 1-2). The legal description of the project site is City of Columbus tax parcel identification number 010062731 (Personal communication with Ralph Recchie, OSU Office of Real Estate on August 23 2006). Regional access to the site would be provided by State Route 315 located about 500 feet (0.15 kilometers) west of the site, U.S. Interstate 670 located about 2.0 miles (3.2 kilometers) south of the site, U.S. Interstate 70 located about 3.5 miles (5.6 kilometers) south of the site and U. S. Interstate 71 located approximately 2.0 miles (3.2 kilometers) west of the site. Local access to the project site is via Fred Taylor Drive just north of West Lane Avenue.

The project site is owned by OSU and includes approximately 5.6 acres (2.26 hectares) of mostly vacant land (of which 1.4 acres or 60,900 square feet are to be developed for the 4-H Center and associated facilities) situated in a campus setting comprised of educational and recreational uses (Figure 1-3). Site visits to the project site and its surroundings were conducted on July 11, July 19 and August 10, 2006. During site visits observations regarding the characteristics of the site and surrounding area were made. The project site is open ground with a maintained grass cover. Some mature trees are located around the perimeter of the building area, generally outside the proposed building footprint. Nearby land uses include Chadwick North grove of native trees and Chadwick Lake to the north, the Value City Arena/Jerome Schottenstein Center (Schottenstein Center) east of Fred Taylor Drive, academic facilities south of West Lane Avenue and two abandoned poultry barns and State Route 315 to the west. OSU archives indicate that the area of land that includes the project site was purchased between 1917 and 1925. The first tract was purchased in 1917 from Louisa Hess, and had apparently been leased prior to the purchase. The remainder was leased and then acquired from Mary Hess in 1925. University archives provide details of the boundaries (based on surveys dating as far back as 1859) and Civil Engineering Maps of the lands were completed in 1919 (#191-63; 191-73; 191-75). These archives indicate such items as fences and stables present on the land (R. Goerling, OSU Office of Archives, e-mail received August 23, 2006). Figure 1-3 presents a series of photographs that characterize the project site and surrounding area.

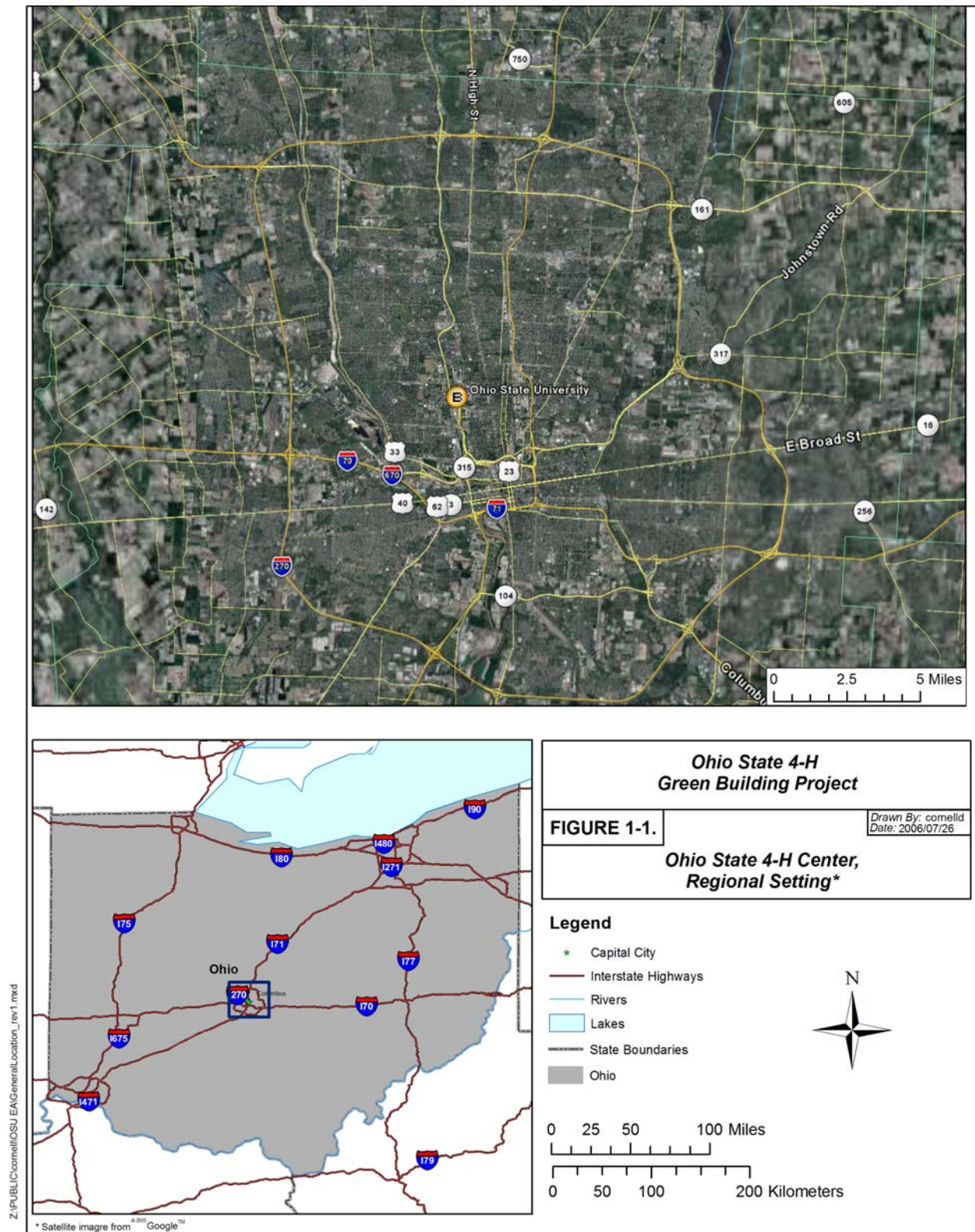
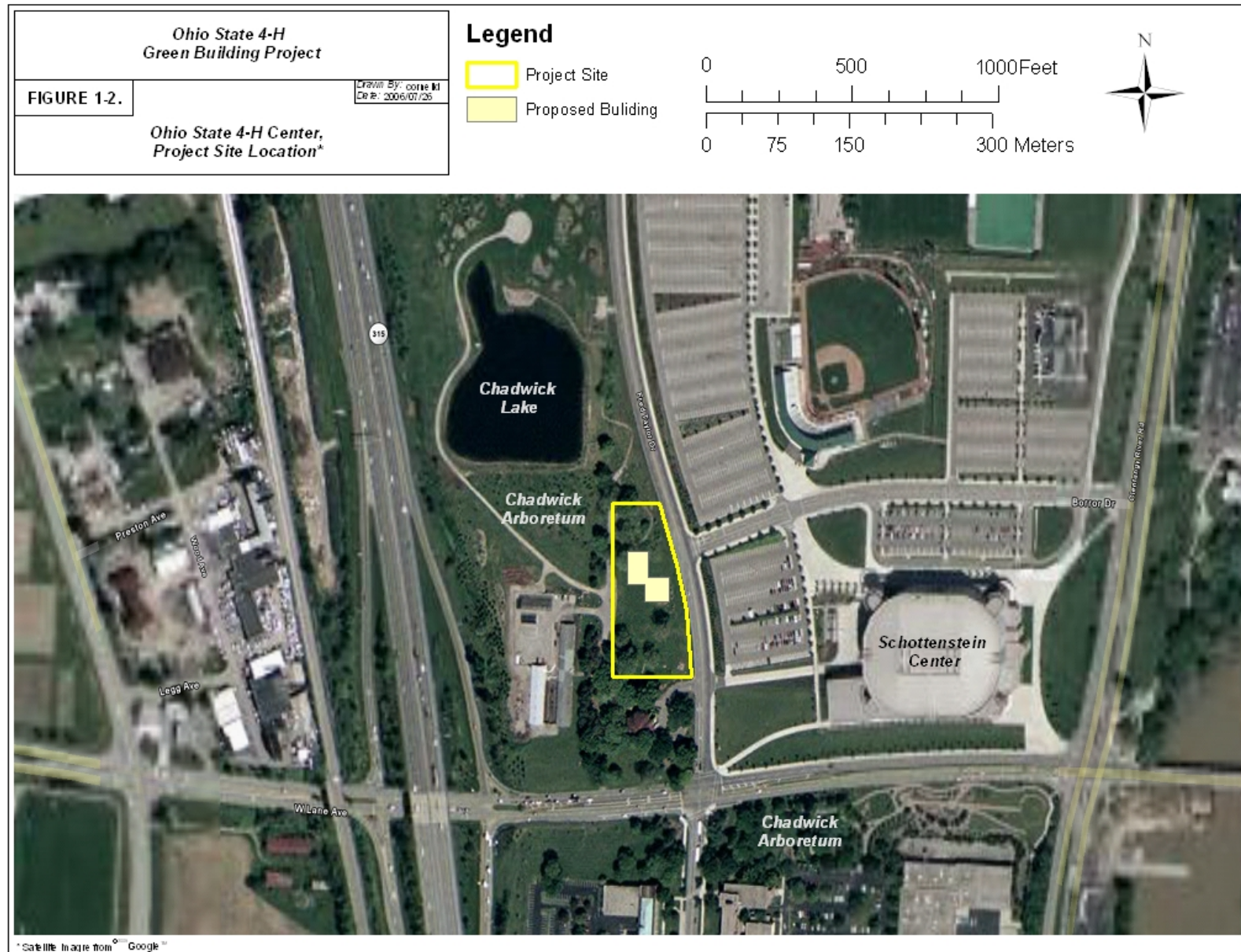


Figure 1-1: Regional Setting for the Ohio 4-H Center with Green Building technologies.





Proposed project site looking north - Chadwick North grove of native trees and shrubs.

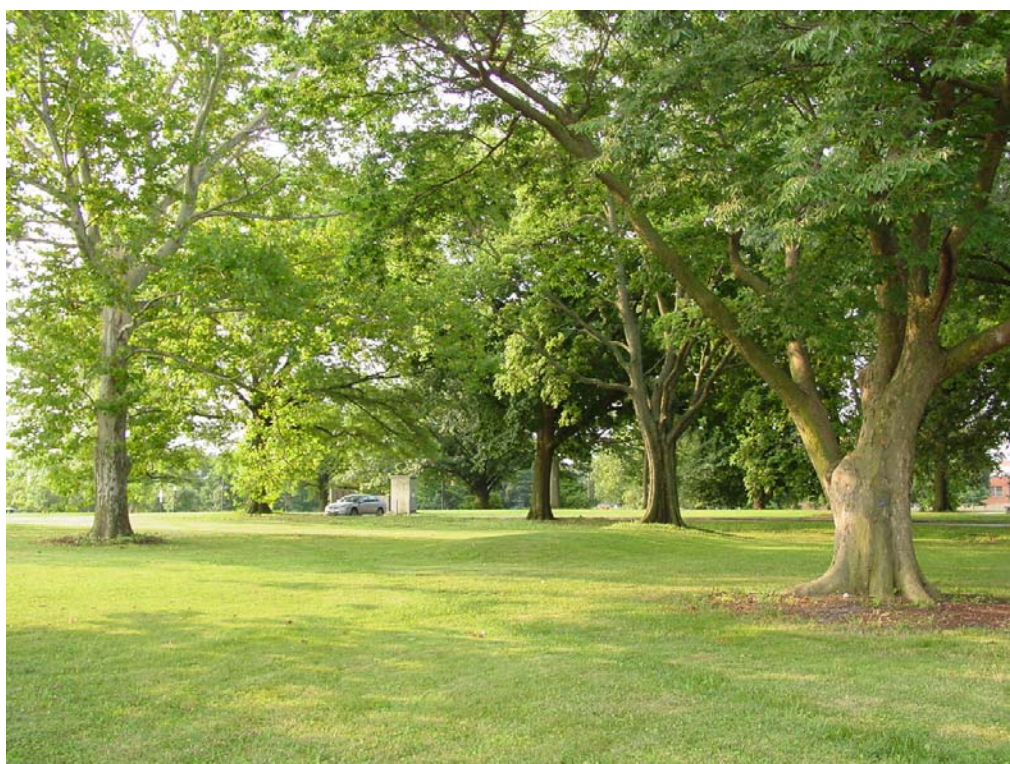


Proposed project site looking west - Existing poultry barns.

Figure 1-3 - Site Photographs



Proposed project site looking east - Schottenstein Center.



Proposed project site looking south - Lane Avenue setback.

Figure 1-3 -Site Photographs (Continued)

1.3 SCOPING: PROCESS AND RESULTS

A scoping/consultation letter was prepared and distributed to county, state and federal agencies and organizations on July 31, 2006. The consultation letter distribution list included agencies and organizations that may have information regarding potential environmental issues in the vicinity of the project site. Appendix A presents the consultation letter, a complete list of the letter recipients, and response letters received during the comment period.

1.3.1 Environmental Issues

The scoping/consultation letter for the Proposed Action identified the following environmental topics to be addressed in the EA:

- Land Use and Transportation;
- Visual Quality/Aesthetics;
- Public Services and Utilities;
- Noise;
- Socioeconomics and Environmental Justice;
- Biological Resources;
- Cultural Resources;
- Air Quality;
- Water Resources;
- Geology and Soils;
- Hazardous Materials and Waste Management; and
- Secondary and Cumulative Impacts.

1.3.2 Alternatives

The following alternatives were defined prior to the scoping period:

- Proposed Action and
- No Action Alternative.

At this time, the Proposed Action and the No Action Alternative are the only alternatives to be addressed in the EA. DOE's Proposed Action involves the provision of federal funds toward construction of the Ohio State 4-H Green Building Technologies project with green building technologies. The No Action Alternative would involve a DOE decision not to provide funding for the project. The applicant, OSU, has already commenced construction activities for this project, so for NEPA compliance purposes and to create a meaningful No Action scenario, potential impacts addressed in this EA are as compared to pre-construction baseline conditions. A privately funded project scenario would be identical, or at least similar to, the Proposed Action. If the applicant (OSU) proceeds without DOE or other federal funding, the project would not be subject to NEPA review.

Other alternatives raised prior to the scoping period were considered, but were eliminated from further analysis. These alternatives and the rationales for eliminating these alternatives are:

- **Locate the Ohio 4-H Center on property not owned by OSU:** Not considered feasible because of the added costs associated with the purchase of a suitable site, and because an off-campus location would not provide the visibility essential to promoting 4-H programs or foster integration of 4-H programs with other OSU disciplines such as the Colleges of Humanities, Human Ecology, Biological Sciences, Medicine, as well as the University Hospitals, OSU Cares, and the YMCA, among others; and
- **Locate the Ohio 4-H Center at some other location within the OSU campus:** This option was evaluated through a weighted-criteria site selection study that involved balancing the requirements of the building's occupants with the University Master Plan (OSU Master Planning Advisory Committee, 1995). This analysis provided quantifiable analysis of alternative on-campus locations, as well as a forum for input from a diverse group of stakeholders who would be affected by the location and use of the new facility. The recommendation of the siting study was to locate the Ohio 4-H Center on the proposed project site, also known as the Dakan Hall site, rather than in other potential locations at OSU.

The Ohio 4-H Center is planned to provide a permanent location for Ohio 4-H on the OSU campus and supply the visibility essential to promoting 4-H programs and to foster integration of 4-H's programs with other university disciplines.

1.4 PURPOSE AND NEED FOR THE PROPOSED ACTION

The purpose of the Proposed Action, the decision to provide federal funding for the construction of the Ohio 4-H Center, is to support a hybrid geothermal/cooling tower HVAC system and the incorporation of recycled structural steel members. The existing 4-H offices on the OSU campus is a small space in the Agricultural Administration Building that does not provide the visibility needed for the integration of 4-H programs into the rapidly expanding university complex and does not allow for the implementation of green building technologies. The Ohio 4-H Center would serve 4-H youth, volunteers, and youth professionals from around the state of Ohio, the nation, and the world. It is planned to be a training resource for other youth organizations, as well as a location for OSU Extension programming reaching throughout Ohio.

The U.S. Congress has acknowledged the merit of this project by providing specific funding through DOE. Based on Congressional action, DOE has funding available to support OSU's participation in the proposed project.

1.5 ORGANIZATION, CONTENT, AND OBJECTIVES OF THIS ENVIRONMENTAL ASSESSMENT

This EA is organized in a manner consistent with NEPA and DOE's NEPA implementation guidelines. The EA has seven primary sections. The first section is a Summary. The organization, content, and objectives of the EA's remaining six chapters are as follows:

Chapter 1 – Introduction. Presents the regulatory context and rationale for preparing this EA, provides background about the project and proposed project site, summarizes the scoping process and results, defines the purpose and need for the project, and clarifies the organization, content, and objectives of this EA.

Chapter 2 - Proposed Action and Alternatives. Presents a detailed description of the project and the characteristics of the construction and operation of the proposed Ohio 4-H Center, along with a description of the No Action Alternative.

Chapter 3 - Affected Environment. Describes environmental baseline information about the project site and surrounding area.

Chapter 4 - Environmental Consequences and Mitigation Measures. Describes potential impacts of the Proposed Action and No Action alternatives, compares the impacts, presents required and recommended measures to reduce impacts, and makes “significance” findings.

Chapter 5 - Bibliography and References. Presents a listing of key documents used in the preparation of this EA and consultations that took place as part of the EA process.

Chapter 6 - List of Preparers. Identifies the individuals who prepared the EA and their roles.

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